DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

A-2-569
Sheet 1
Revision 5
NAVY
N3N-3

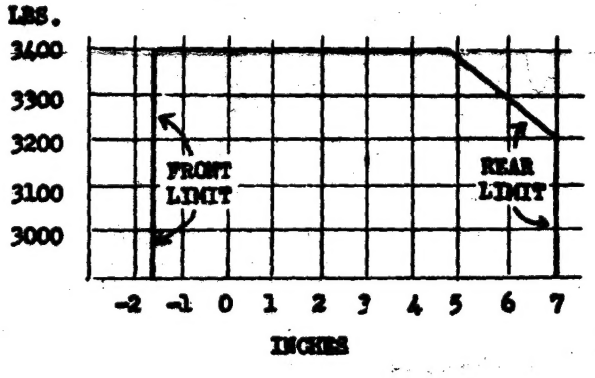
December 21, 1950

AIRCRAFT SPECIFICATION NO. A-2-569

Manufacturer: Naval Aircraft Factory
Philadelphia, Penn.

I - Model N3N-3, 2 PCLB

Engine	Wright R-760-2, -4 or -8 built by Naval Aircraft Fact. (Equivalent to Wright R-760E-7) (See NOTE 2 for Lycoming engines and NOTE 3 for P & W TIB-3 engine)
Fuel	73 min. octane aviation gasoline
Engine limits	For all operations, 2000 rpm (235 hp) (See NOTE 1(g) for placard)
Airspeed limits	Level flight or climb 126 mph True Ind. Glide or dive 152 mph True Ind. (Glide or dive speed may be increased to 180 mph True Indicated if Max. Weight is restricted to 2800 lbs.)
Propeller limits	Diameter - not over 102 in. (See NOTE 1(g) for not under 100 in. (additional limitations.
C.G. Range	(-1.6) to (+7.0) at 3200 lbs. or less (-1.6) to (+4.9) at 3400 lbs. Straight line variation between points given.



Empty weight C.G. range	None
Datum	Leading edge of lower wing
Leveling Means	Top surface of upper longerons in either cockpit.
Maximum weight	3200 lbs. (See NOTES 2 and 3 for 3400 lbs.)
No. seats	2 (one at +28 and one at +75)
Maximum baggage	20 lbs. (+100)
Fuel capacity	45 gals. (-11)
Oil capacity	3-3/4 gals. (-31)

Control surface movements	Elevators	- Up 35°; Down 25°
	Elevator tab	- Up 15°; Down 15°
	Rudder	- Right 30°; Left 30°
	Aileron	- Up 30°; Down 15°
Certification basis	CAR 4a.031	
Serial Nos.	All eligible per NOTES 1 and 2	
Required equipment	Items 1, 101, 102, 103, 201, 202, and 403.	

Propeller and Propeller Accessories

1. Propeller - adj. metal - Navy 5406AL or 5406AR hub and 4350F blades (See NOTE 1(e) for restrictions) 86 lbs. (-80)

Engines and Engine Accessories (Fuel and Oil System)

101. Carburetor air heater assy. (See NOTE 1(b) for modifications) 13 lbs.
102. Engine-driven fuel pump - Pesco B-400
103. Hand fuel pump
104. Fire ext. press. type (engine section) (-9)
105. Carburetor air cleaner
106. Starter - hand cranking
107. Engine primer

Landing Gear

201. Bendix 30x5 fabricated wheels (-19.5)
202. 10x3 tail wheel (+183.5)

Electrical Equipment

301. Battery (See NOTE 1(c) for modifications) (-29)
302. Swivel panel light (front and rear)
303. Anchor (turtle back) light
304. Wing position lights
305. Tail light (See NOTE 1 (c) for modifications)

Interior Equipment

401. First-aid kit
402. Fire extinguisher - portable
403. Safety belts (two) - MAP 39941 (+28) & (+75)
404. Venturi tube

NOTE 1. Prior to certification, each aircraft must comply with the following:

(a) Firewall. Firewall either to be completely replaced by, or covered or backed by, one of the following materials:
(1) Stainless steel - .015 in. thick
(2) Nickel-chromium-iron alloy sheet - .015 in. thick
(3) Low carbon steel - .018 in. thick (aluminum coated or otherwise protected against corrosion)
(4) Monel metal - .018 in. thick
(5) Terne plate - .018 in. thick

(b) Carburetor Air Heater. Carburetor air heater to be modified in accordance with Airworthiness Bulletin No. 83.

(c) Electrical System. Battery and battery supports to be removed or, if battery is retained, a master switch, approved type tail light, and battery to be installed and structure adjacent to battery to be painted with acid-proof paint.

(d) Cockpit Air Contamination. The fuselage skin openings around landing gear members and any other openings leading through the bottom of the fuselage or lower wing into the cockpits to be sealed with suitable boots or skin patches

to prevent engine exhaust from entering the cockpits and contaminating the air with carbon monoxide.

(e) Propeller. If 9 ft. dia. propeller is installed, it should be reduced to 8 ft. 6 in. diameter. Pitch setting at 42 in. sta. for 8 ft. 6 in. dia. blades - 11°. Setting may be 14.6° if max. weight is restricted to 2800 lbs. Propeller to be indexed so that blades are 45° ahead of the locating screw on the propeller shaft (in the direction of rotation)

(f) Spin Placard. Placards reading "Intentional Spinning Prohibited" to be installed in both cockpits.

(g) Engine Operation Placard. Placards reading "Avoid Continuous Operation above 1800 rpm or below 1680 rpm" to be installed in both cockpits.

(h) Solo Flying Placard. Placard reading "Fly Solo from Front Cockpit Only" to be installed in rear cockpit unless complete set of engine controls are installed in rear cockpit.

(i) Instrument Marking. Tachometer to be marked at 2000 rpm. Airspeed indicator to be marked at 126 mph and 152 mph.

(j) Fuel and Oil Markings. The words "Fuel", "73 octane", and "45 gallons" to be marked on or adjacent to fuel filler cap. The words "Oil" and "3-3/4 gallons" to be marked on or adjacent to oil filler cap.

NOTE 2. Eligible for installation of Lycoming R-680-E3, -E3A, or -E3B engine (military designation R-680-9 or R-680-13). The following are applicable to this installation:

(a) Fuel - min. 87 octane aviation gasoline.

(b) Engine limits: Maximum continuous, 2200 rpm (285 hp)
Take-off (one minute), 2300 rpm (300 hp)

(c) Airspeed limits:
Level flight or climb 126 mph True Ind.
Glide or dive 164 mph True Ind.

(d) Propeller - Ham. Std. Constant Speed, 2D30-Hub, 6135A-9 Blades, 1012-A1 Governor.

(e) Propeller limits: Pitch settings at 42 in. sta. -Low 9°, high 19°; dia. 8' 3" max., 8' 1" min.

(f) Powerplant installation - AT-10 exhaust, carburetor heater muff, and oil tank (6 gals.) may be installed without modification. No cowling or engine baffles may be used unless flight tested by CAA representatives.

(g) Maximum weight - 3400 lbs. provided that wheels and tires having an approved rating of 1700 lbs. each (or greater) are installed. (BT-13 or BT-15 wheels, tires, and axles are satisfactory.)

(h) Engine mount - Satisfactory engine mounts have been substantiated by the following modifiers:
Brandt, Perkins, and Brandt, Marysville, Calif., Drawing No. 1.
Rankin Aviation Industries, Tulare, Calif., Drawing dated February, 1947.
South Delta Aviation Service, Rolling Fork, Miss., Original R-760 mount modified for Lycoming R-680 engine.

(i) Fuel pumps - Wobble (U.A.P. Type D-2) Engine Driven (AN 4100 CK)

(j) NOTE 1, parts (b), (e), (g), (i) and (j) are not applicable to this installation. Required equipment items 1, 101, 102, 103, and 201 should be replaced by corresponding items specified in this note.

NOTE 3. Eligible for installation of Pratt and Whitney T1B-3 (R-985-AN-1 or -AN-3) engine. The following are applicable to this installation:

(a) Fuel - minimum 87 octane aviation gasoline

(b) Engine limits - Maximum continuous, 37.5 in. Hg., 2300 rpm (450 hp)
Take-off (one minute), 37.5 in. Hg., 2300 rpm (450 hp)

With these power ratings, a minimum of 67½ gals. of fuel capacity must be provided except in Restricted Category aircraft (certificated prior to October 11, 1950) in which case the airplane must be placarded to be re-fueled for each hour of operation.

(c) Airspeed limits - Level flight or climb 100 mph True Ind.
Glide or dive 120 mph True Ind.

(d) Propeller
(1) Ham. Std., two-position, 2B30 hub, 6198A-12 to -18 blades
Diameter - not over 108 in., not under 102 in.
Low pitch limit at 42 in. R. 13.5°
High pitch limit at 42 in. R. 18.0°.
(2) Western Propeller Co. model W2-1-9'-0" (ground adjustable)
Diameter - not over 108 in., not under 106 in.
Pitch setting at 42 in. R. 12.5°.
(3) Ham. Std., 5406 hub with 1945-6 blades, 1C1-12 blades, 33C1 blades or A3A1-12 blades
Diameter with 1C1-12 blades - not over 108 in., not under 100 in.
Pitch setting at 42 in. R. 12.5°.
Diameter with 1945-6, 33C1 or A3A1-12 blades - not over 108 in., not under 106 in.
Pitch setting at 42 in. R. (33C1 blades) 12.5°
Pitch setting at 42 in. R. (A3A1-12 blades) 12.5°
Index A3A1-12 propeller at 0° to crank throw
Pitch setting at 42 in. R. (1945-6 blades) 13.3°.

(e) C.G. range - (-1.6) to (+4.9) at 3400 lbs.

(f) Powerplant installation: BT-13 exhaust collector, carburetor heater muff, oil tank, oil cooler (Model U.A.P. U-3170-W-D5) and air cleaner may be installed provided the heater muff is suitably modified to insure adequate heat rise. No outside cowling or engine baffles may be used unless flight tested by CAA representatives.

(g) Maximum weight - 3400 lbs. provided that wheels and tires having an approved rating of 1700 lbs. each (or greater) are installed. (BT-13 or BT-15 wheels, tires and axles are satisfactory.) (For Restricted Category take-off weight for airplanes certificated prior to October 11, 1950, see NOTE 4.)

(h) Engine mount - Satisfactory engine mounts have been substantiated by the following modifiers:
(1) Marsh Aviation Co., P. O. Box 1031, Phoenix, Arizona.
Dwg. No. MA-3.
(2) Albert D. Waite, 3133 McKinley Blvd., Sacramento, Calif.
Dwg. No. 1
(3) Quick Flying Service, 2427 E. Buchanan St., Phoenix, Arizona.
Dwg. No. Q985N3
(4) Goettl's Metalcraft Co., 2431 E. Buchanan St., Phoenix, Arizona
Dwg. No. G2352M

(i) Fuel pumps -
(1) Engine-driven Chandler Evans, Type F (AN4100)
(2) Hand wobble model U.A.P. D-3

(j) NOTE 1 parts (b), (e), (g), (h), (i) and (j) are not applicable to this installation.

NOTE 4. Model N3N-3 aircraft which are eligible for 3400 lbs. and were certificated in the Restricted Category prior to October 11, 1950, may continue to be operated with the following limitations with the engines listed in NOTES 2 or 3:

(a) Maximum take-off weight	3740 lbs.
Maximum landing weight	3400 lbs.
*Maneuvering speed at maximum weight	114 mph
C.G. range	(-1.6) to (+4.9)

(b) The following placards must be in full view of the pilot:
(1) * "Maneuvering speed at maximum weight not to exceed 114 mph."
(2) "Intentional spins prohibited."

All original certification in the Restricted Category after October 11, 1950, must be in accordance with CAR and CAM 8.

* Airplanes with "Level flight or climb" speed less than 114 mph should have "maneuvering" speed reduced to correspond with "level flight or climb" speed.

. . . END . . .

DEPARTMENT OF COMMERCE
CIVIL AERONAUTICS ADMINISTRATION

A-2-569
Sheet 1
Revision 5
NAVY
N3N-3

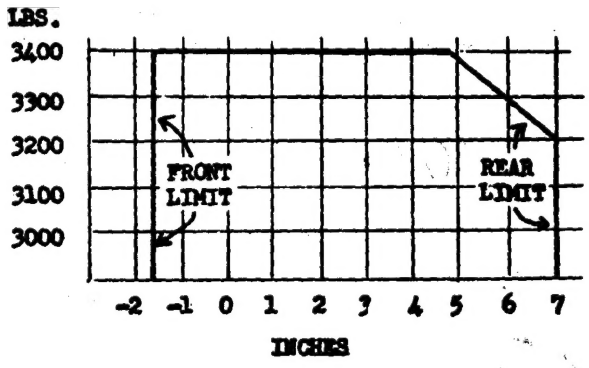
December 21, 1950

AIRCRAFT SPECIFICATION NO. A-2-569

Manufacturer: Naval Aircraft Factory
Philadelphia, Penn.

I - Model N3N-3, 2 PCLB

Engine	Wright R-760-2, -4 or -8 built by Naval Aircraft Fact. (Equivalent to Wright R-760E-T) (See NOTE 2 for Lycoming engines and NOTE 3 for P & W TIB-3 engine)
Fuel	73 min. octane aviation gasoline
Engine limits	For all operations, 2000 rpm (235 hp) (See NOTE 1(g) for placard)
Airspeed limits	Level flight or climb 126 mph True Ind. 110 KTS. Glide or dive 152 mph True Ind. 132 " (Glide or dive speed may be increased to 180 mph True Indicated if Max. Weight is restricted to 2800 lbs.)
Propeller limits	Diameter - not over 102 in. (See NOTE 1(g) for not under 100 in. (additional limitations.
C.G. Range	(-1.6) to (+7.0) at 3200 lbs. or less (-1.6) to (+4.9) at 3400 lbs. Straight line variation between points given.



Empty weight C.G. range	None
Datum	Leading edge of lower wing
Leveling Means	Top surface of upper longerons in either cockpit.
Maximum weight	3200 lbs. (See NOTES 2 and 3 for 3400 lbs.)
No. seats	2 (one at +28 and one at +75)
Maximum baggage	20 lbs. (+100)
Fuel capacity	45 gals. (-11)
Oil capacity	3-3/4 gals. (-31)

Control surface movements	Elevators	- Up 35°; Down 25°
	Elevator tab	- Up 15°; Down 15°
	Rudder	- Right 30°; Left 30°
	Aileron	- Up 30°; Down 18°
Certification basis	CAR 4a.031	
Serial Nos.	All eligible per NOTES 1 and 2	
Required equipment	Items 1, 101, 102, 103, 201, 202, and 403.	

Propeller and Propeller Accessories

1.	Propeller - adj. metal - Navy 5406AL or 5406AR hub and 4350F blades (See NOTE 1(e) for restrictions)	86 lbs. (-80)

Engines and Engine Accessories (Fuel and Oil System)

101.	Carburetor air heater assy. (See NOTE 1(b) for modifications)	13 lbs.
102.	Engine-driven fuel pump - Pesco B-400	
103.	Hand fuel pump	
104.	Fire ext. press. type (engine section)	(-9)
105.	Carburetor air cleaner	
106.	Starter - hand cranking	
107.	Engine primer	

Landing Gear

201.	Bendix 30x5 fabricated wheels	(-19.5)
202.	10x3 tail wheel	(+183.5)

Electrical Equipment

301.	Battery (See NOTE 1(c) for modifications)	(-29)
302.	Swivel panel light (front and rear)	
303.	Anchor (turtle back) light	
304.	Wing position lights	
305.	Tail light (See NOTE 1 (c) for modifications)	

Interior Equipment

401.	First-aid kit	
402.	Fire extinguisher - portable	
403.	Safety belts (two) - NAF 39941	(+28) & (+75)
404.	Venturi tube	

NOTE 1. Prior to certification, each aircraft must comply with the following:

(a) Firewall. Firewall either to be completely replaced by, or covered or backed by, one of the following materials:
- (1) Stainless steel - .015 in. thick
- (2) Nickel-chromium-iron alloy sheet - .015 in. thick
- (3) Low carbon steel - .018 in. thick (aluminum coated or otherwise protected against corrosion)
- (4) Monel metal - .018 in. thick
- (5) Terne plate - .018 in. thick

(b) Carburetor Air Heater. Carburetor air heater to be modified in accordance with Airworthiness Bulletin No. 83.

(c) Electrical System. Battery and battery supports to be removed or, if battery is retained, a master switch, approved type tail light, and battery to be installed and structure adjacent to battery to be painted with acid-proof paint.

(d) Cockpit Air Contamination. The fuselage skin openings around landing gear members and any other openings leading through the bottom of the fuselage or lower wing into the cockpits to be sealed with suitable boots or skin patches

to prevent engine exhaust from entering the cockpits and contaminating the air with carbon monoxide.

(e) Propeller. If 9 ft. dia. propeller is installed, it should be reduced to 8 ft. 6 in. diameter. Pitch setting at 42 in. sta. for 8 ft. 6 in. dia. blades - 11°. Setting may be 14.6° if max. weight is restricted to 2800 lbs. Propeller to be indexed so that blades are 45° ahead of the locating screw on the propeller shaft (in the direction of rotation)

(f) Spin Placard. Placards reading "Intentional Spinning Prohibited" to be installed in both cockpits.

(g) Engine Operation Placard. Placards reading "Avoid Continuous Operation above 1800 rpm or below 1680 rpm" to be installed in both cockpits.

(h) Solo Flying Placard. Placard reading "Fly Solo from Front Cockpit Only" to be installed in rear cockpit unless complete set of engine controls are installed in rear cockpit.

(i) Instrument Marking. Tachometer to be marked at 2000 rpm. Airspeed indicator to be marked at 126 mph and 152 mph.

(j) Fuel and Oil Markings. The words "Fuel", "73 octane", and "45 gallons" to be marked on or adjacent to fuel filler cap. The words "Oil" and "3-3/4 gallons" to be marked on or adjacent to oil filler cap.

NOTE 2. Eligible for installation of Lycoming R-680-E3, -E3A, or -E3B engine (military designation R-680-9 or R-680-13). The following are applicable to this installation:

(a) Fuel - min. 87 octane aviation gasoline.

(b) Engine limits: Maximum continuous, 2200 rpm (285 hp)
Take-off (one minute), 2300 rpm (300 hp)

(c) Airspeed limits:
Level flight or climb 126 mph True Ind.
Glide or dive 164 mph True Ind.

(d) Propeller - Ham. Std. Constant Speed, 2B20 Hub, 6135A-9 Blades, 1012-A1 Governor.

(e) Propeller limits: Pitch settings at 42 in. sta. -Low 9°, high 19°; dia. 8' 3" max., 8' 1" min.

(f) Powerplant installation - AT-10 exhaust, carburetor heater muff, and oil tank (6 gals.) may be installed without modification. No cowling or engine baffles may be used unless flight tested by CAA representatives.

(g) Maximum weight - 3400 lbs. provided that wheels and tires having an approved rating of 1700 lbs. each (or greater) are installed. (BT-13 or BT-15 wheels, tires, and axles are satisfactory.)

(h) Engine mount - Satisfactory engine mounts have been substantiated by the following modifiers:
Brandt, Perkins, and Brandt, Marysville, Calif., Drawing No. 1.
Rankin Aviation Industries, Tulare, Calif., Drawing dated February, 1947.
South Delta Aviation Service, Rolling Fork, Miss., Original R-760 mount modified for Lycoming R-680 engine.

(i) Fuel pumps - Wobble (U.A.P. Type D-2) Engine Driven (AN 4100 CE)

(j) NOTE 1, parts (b), (e), (g), (i) and (j) are not applicable to this installation. Required equipment items 1, 101, 102, 103, and 201 should be replaced by corresponding items specified in this note.

NOTE 3. Eligible for installation of Pratt and Whitney T1B-3 (R-985-AN-1 or -AN-3) engine. The following are applicable to this installation:

(a) Fuel - minimum 87 octane aviation gasoline

(b) Engine limits - Maximum continuous, 37.5 in. Hg., 2300 rpm (450 hp)
Take-off (one minute), 37.5 in. Hg., 2300 rpm (450 hp)
With these power ratings, a minimum of 67½ gals. of fuel capacity must be provided except in Restricted Category aircraft (certificated prior to October 11, 1950) in which case the airplane must be placarded to be re-fueled for each hour of operation.

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(c) Airspeed limits - Level flight or climb 100 mph True Ind.
Glide or dive 120 mph True Ind.

(d) Propeller
(1) Ham. Std., two-position, 2D30 hub, 6101A-12 to -18 blades
Diameter - not over 108 in., not under 102 in.
Low pitch limit at 42 in. R. 13.5°
High pitch limit at 42 in. R. 18.0°.
(2) Western Propeller Co. model W2-1-9'-0" (ground adjustable)
Diameter - not over 108 in., not under 106 in.
Pitch setting at 42 in. R. 12.5°.
(3) Ham. Std., 5406 hub with 1945-6 blades, 1C1-12 blades, 33C1 blades or A3A1-12 blades
Diameter with 1C1-12 blades - not over 108 in., not under 100 in.
Pitch setting at 42 in. R. 12.5°.
Diameter with 1945-6, 33C1 or A3A1-12 blades - not over 108 in., not under 106 in.
Pitch setting at 42 in. R. (33C1 blades) 12.5°
Pitch setting at 42 in. R. (A3A1-12 blades) 12.5°
Index A3A1-12 propeller at 0° to crank throw
Pitch setting at 42 in. R. (1945-6 blades) 13.3°.

(e) C.G. range - (-1.6) to (+4.9) at 3400 lbs.

(f) Powerplant installation: BT-13 exhaust collector, carburetor heater muff, oil tank, oil cooler (Model U.A.P. U-3170-W-D5) and air cleaner may be installed provided the heater muff is suitably modified to insure adequate heat rise. No outside cowling or engine baffles may be used unless flight tested by CAA representatives.

(g) Maximum weight - 3400 lbs. provided that wheels and tires having an approved rating of 1700 lbs. each (or greater) are installed. (BT-13 or BT-15 wheels, tires and axles are satisfactory.) (For Restricted Category take-off weight for airplanes certificated prior to October 11, 1950, see NOTE 4.)

(h) Engine mount - Satisfactory engine mounts have been substantiated by the following modifiers:
(1) Marsh Aviation Co., P. O. Box 1031, Phoenix, Arizona.
Dwg. No. MA-3.
(2) Albert D. Waite, 3133 McKinley Blvd., Sacramento, Calif.
Dwg. No. 1
(3) Quick Flying Service, 2427 E. Buchanan St., Phoenix, Arizona.
Dwg. No. Q985N3
(4) Goettl's Metalcraft Co., 2431 E. Buchanan St., Phoenix, Arizona
Dwg. No. G2352M

(i) Fuel pumps -
(1) Engine-driven Chandler Evans, Type F (AN4100)
(2) Hand wobble model U.A.P. D-3

(j) NOTE 1 parts (b), (e), (g), (h), (i) and (j) are not applicable to this installation.

NOTE 4. Model N3N-3 aircraft which are eligible for 3400 lbs. and were certificated in the Restricted Category prior to October 11, 1950, may continue to be operated with the following limitations with the engines listed in NOTES 2 or 3:

(a) Maximum take-off weight	3740 lbs.
Maximum landing weight	3400 lbs.
*Maneuvering speed at maximum weight	114 mph
C.G. range	(-1.6) to (+4.9)

(b) The following placards must be in full view of the pilot:
(1) * "Maneuvering speed at maximum weight not to exceed 114 mph."
(2) "Intentional spins prohibited."

All original certification in the Restricted Category after October 11, 1950, must be in accordance with CAR and CAM 8.

* Airplanes with "Level flight or climb" speed less than 114 mph should have "maneuvering" speed reduced to correspond with "level flight or climb" speed.

. . . END . . .